

OPTALIGN touch Catalog

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OPTALIGN touch– Shaft alignment

OPTALIGN touch is a cloud-enabled shaft alignment system featuring touchscreen operation and built-in mobile connectivity.



Application

- Alignment of horizontal, vertical and flange-mounted rotating machines
- Coupled, uncoupled and non-rotatable shafts

Features

- sensALIGN 5 sensor featuring Single-Laser technology and 2 position detectors
- Simultaneous Live Move with acoustic assistance
- Capacitive touchscreen
- Measurement table showing the different alignment jobs
- Customized tolerances (including asymmetric)
- Interactive real 3-D format for machines
- Communication using WiFi, Bluetooth and RFID
- Built-in camera

Ordering information

OPTALIGN touch is available in four variants.

Item No.	Variant
ALI 51.000 FULL	OPTALIGN touch, full version
ALI 51.000 MOB	OPTALIGN touch, mobile connectivity version
ALI 51.000 CAM	OPTALIGN touch, built-in camera version
ALI 51.000 STD	OPTALIGN touch, standard version

The items delivered within the box are shown in the following overview.

Scope of supply

Content			Variant			
Item No.	Description	Details	Full	Connectivity	Camera	Standard
ALI 50.200-FULL	touch device FULL	p. 8	✓	✗	✗	✗
ALI 50.200-MOB	touch device MOB	p. 8	✗	✓	✗	✗
ALI 50.200-CAM	touch device CAM	p. 8	✗	✗	✓	✗
ALI 50.200-STD	touch device STD	p. 8	✗	✗	✗	✓
ALI 50.651	Power supply / Charger for touch device	p. 11	✓	✓	✓	✓
ALI 3.901	sensALIGN 5 sensor	p. 9	✓	✓	✓	✓
ALI 3.910	sensALIGN 5 laser including batteries	p. 10	✓	✓	✓	✓
ALI 3.953	sensALIGN 5 sensor charger (universal)	p. 9	✓	✓	✓	✓
ALI 3.952	Micro USB cable (for charging the sensor)	p. 11	✓	✓	✓	✓
ALI 9.516.DG	sensALIGN 5 sensor inspection certificate		✓	✓	✓	✓
ALI 9.514.DG	sensALIGN 5 laser inspection certificate		✓	✓	✓	✓
ALI 50.801	Ruggedized trolley case, OPTALIGN touch		✓	✓	✓	✓
ALI 50.628-25	RFID tags, 25 pieces		✓	✓	✗	✗
ALI 3.589	Tape measure, mm/inch	---	✓	✓	✓	✓
ALI 2.911	Cleaning cloth	---	✓	✓	✓	✓
ALI 12.502-2	PC/USB cable, 2 m (78 3/4")	---	✓	✓	✓	✓
ALI 17.451	USB memory stick with ARC 4.0 software and product literature		✓	✓	✓	✓
ALI 2.118	Compact chain-type bracket		✓, 2x	✓, 2x	✓, 2x	✓, 2x
DOC 51.101	Pocket guide		✓	✓	✓	✓
DOC 50.601	Safety and general information		✓	✓	✓	✓

Note: The items in the box for the four variants are fixed.

Optional items may be ordered for any of the four variants.

Optional accessories

Item No.	Description – optional accessory	Note	Details
PC software			
ALI 17.000-50	ARC 4.0 device activation for touch device	optional for Camera and Standard versions	p. 19
Application related add-ons			
ALI 50.900	Multi Coupling Add-on for sensALIGN 7 sensor	for the alignment of multiple couplings	p. 14
Brackets			
ALI 2.112 SET-S	Compact magnetic bracket set, standard		
ALI 2.230-1	Magnetic sliding bracket for flange		
ALI 2.109 SET	Extra-thin bracket set		
ALI 2.109 LSET	Small extra-thin bracket set		
ALI 2.761 SET iS	Universal magnetic bracket set for flanges and bores		
ALI 2.220 SET	Universal magnetic sliding bracket for flanges and bores, set		
ALI 2.460	Chain-type bracket for large diameter, set		
Posts, chains and miscellany			
ALI 2.170	115 mm (4 1/2") support post, white	2 pieces required for each bracket	
ALI 2.171	150 mm (5 15/16") support post, black	2 pieces required for each bracket	
ALI 2.173	250 mm (9 7/8") support post, green	2 pieces required for each bracket	
ALI 2.174	300 mm (11 13/16") support post, yellow	2 pieces required for each bracket	
ALI 2.114	300 mm tension chain		
ALI 2.116	1500 mm tension chain		
ALI 50.250	Carrying strap		
ALI 2.191	Anti torsion bridge for 2 support posts		

Note: For more information about brackets and shims, refer to the corresponding accessory catalog.

Spare parts

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sensALIGN 5	9
AC power supply / Battery charger	11

touch device



Features

- Capacitive touchscreen
- Interactive real 3-D format for machines
- Communication using WiFi, Bluetooth and RFID
- Built-in camera
- Robust, nonslip housing
- Industrial-proofed interfaces
- Long operating time with lithium-ion battery

TECHNICAL DATA

Parameter	touch device
CPU	1.0 GHz quad core ARM Cortex-A9
Memory	Memory: 2 GB RAM, 1 GB Internal Flash, 32 GB SD-Card Memory
Display	Projective capacitive multi-touchscreen Transmissive (sunlight-readable) backlit TFT color graphic display; optically bonded, protective industrial display, integrated light sensor for automated adjustment of the brightness to the display Resolution: 800 x 480 Pixel Dimensions: 178 mm (7") diagonal
LED indicators	3 LEDs for battery status 1 LED for WiFi communication
Power supply	Lithium-ion rechargeable battery 3.6 V / 80 Wh 12 hours typical use* AC adapter/charger: 12 V / 36 W; standard barrel connector *(based upon an operating cycle of 25% measurement, 25% computation, 50% 'sleep' mode)
External interface	USB host for memory stick USB slave for PC communication, charging (5 V DC / 1.5 A) RS-232 (serial) for sensor, RS-485 (serial) for sensor, I-Data for sensor, Bluetooth, WiFi, RFID integrated Integrated Wireless LAN IEEE 802.11 b/g/n up to 72.2 Mbps
Camera	5 MP
Environmental protection	IP 65 (dustproof and water jets resistant) Shockproof Relative humidity: 10% to 90%
Drop test	1 m (3 1/4 ft)
Temperature range	Operation / Charging: 0 °C to 40 °C (32 °F to 104 °F) Storage: -10 °C to 50 °C (14 °F to 122 °F)
Dimensions	Approx. 273 x 181 x 56 mm (10 3/4" x 7 1/8" x 2 3/16")
Weight	Approx. 1.88 kg (4.1 lbs)

sensALIGN 5



Features

- Simultaneous monitoring of horizontal and vertical correction moves through single-laser technology and 2 position detectors
- Bluetooth integrated
- Precision built-in inclinometer
- Ambient light compensation
- Faster data transmission
- Laser and sensor battery status warning
- Longer laser and sensor runtime

TECHNICAL DATA

Parameter	sensALIGN 5 sensor
Type	5-axis sensor: 2 planes (4 displacement axes and angle) Measurement area: unlimited, dynamically extendible (U.S. Patent 6,040,903) Resolution: 1 μm (0.04 mil) and angular 10 μRad Accuracy (avg): > 98% Measurement rate: approx. 20 Hz
LED indicators	1 LED for laser adjustment and battery status 1 LED for Bluetooth communication
Power supply	Lithium-Ion rechargeable battery: 3.7 V / 5 Wh Operating time: 10 hours (continuous use) Charging time: Using charger – 2.5 h for up to 90%; 3.5 h for up to 100% Using USB port – 3 h for up to 90%; 4 h for up to 100%
External interface	Integrated Bluetooth 4.1 Smart Ready wireless communication USB 2.0 Full Speed
Transmission distance	Up to 30 m [98 ft] direct line of sight
Environmental protection	IP 65 (dustproof and water jets resistant) Shockproof Relative humidity: 10% to 90%
Ambient light protection	Yes
Temperature range	Operation: -10 °C to 50 °C (14 °F to 122 °F) Storage: -20 °C to 60 °C (-4 °F to 140 °F) Charging: 0 °C to 40 °C (32 °F to 104 °F)
Dimensions	Approx. 105 x 74 x 58 mm (4 9/64" x 2 29/32" x 2 1/4")
Weight	Approx. 235 g (8 1/3 oz.)
Universal charger for sensALIGN 5 sensor	
Input	100 - 240 VAC / 50 - 60 Hz / 0.2 A
Output	5 VDC / 1 A / 5 W
Protection class	II / IP 52

Parameter	sensALIGN 5 sensor
Connector	Four plug adapters for North America, Japan, Australia, UK, EU
Device connection	USB cable
Temperature range	Operation: 0 ... +40°C (32 °F to 104 °F); Storage: -10 ..+80°C (14 °F to 176 °F)
Dimensions	approx. 71 x 41 x 31 mm [2 13/16" x 1 5/8" x 1 1/4"]

Parameter	sensALIGN 5 laser
Type	Semiconductor laser diode
Beam divergence	0.3 mrad
Beam power	< 1 mW
Wavelength	630 – 680 nm (red, visible)
Laser class	Class 2 according to IEC 60825-1:2007 The laser complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. Safety precaution: Do not look into laser beam
Power supply	Batteries: 2 x 1.5 V IEC LR6 ("AA") Operating time: 180 hours
Protection	IP 65 (dustproof and water jets resistant) Shockproof Relative humidity: 10% to 90%
Temperature range	Operation: -10 °C to 50 °C (14 °F to 122 °F) Storage: -20 °C to 60 °C (-4 °F to 140 °F)
Dimensions	Approx. 105 x 74 x 47 mm (4 9/64" x 2 29/32" x 1 27/32")
Weight	Approx. 225 g (7 15/16 oz.)

AC power supply / Battery charger

With this power device you can supply the computer with mains power (e.g. in the office) or charge the built-in rechargeable battery.



Features

- Protection class II
- Five replaceable plug adapters for various world regions:
 - North America, Japan
 - Australia
 - UK
 - EU
 - China

Power supply / Battery charger incl. five plug adapters.

Order information

Item No.*	Name	Included in the scope of delivery of ...
ALI 12.651-I	AC power supply / battery charger, International, 12V	OPTALIGN smart RS5 BT ROTALIGN smart RS5 EX CENTRALIGN Ultra
ALI 50.651	AC power supply / battery charger, International, 12V	ROTALIGN touch, OPTALIGN touch, VIBSCANNER 2
ALI 24.651	AC power supply / battery charger, International, 12V	SHAFTALIGN
ALI 4.651	Battery charger, International, 5V	ROTALIGN touch Multi-Coupling add-on for shaft alignment with sensALIGN 7

* The different item numbers are due to different device connectors

TECHNICAL INFORMATION

Technical Data

Parameter	12 V power supply / battery charger	5 V battery charger
Input	100 - 240 VAC / 50 - 60 Hz / 1.0 A	100 - 240 VAC / 50 - 60 Hz / 0.6 A
Output	12 VDC / 3.0 A / 36 W	5 VDC / 3.0 A / 15 W
Env. protection	II / IP 52	
Temperature range	0 ... +40°C (Operation); -40 ..+80°C (Storage)	
Dimensions	approx. 43 x 74 x 35 mm	

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Accessories

The following section provides detailed information about the components and the optional accessories.

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Multi-Coupling add-on (sensALIGN 7)

With this add-on package you can use an existing PRÜFTECHNIK system for shaft alignment on a machine train with more than one coupling.

The Multi-Coupling add-on package is intended for the following alignment systems:

- ROTALIGN touch,
- OPTALIGN touch
- ROTALIGN Ultra iS, with firmware 3.x



sensALIGN 7 benefits

- Real-time measuring quality with IntelliSWEEP™
- 7-axis measuring system with HD PSD, XXL detector
- Integrated vibration measurement
- Considered vibration influenced from the surroundings
- Integrated precision inclinometers with MEMS
- Laser-sensor communication via laser beam
- Wireless communication via Bluetooth
- Rechargeable Li-polymer battery of the latest generation

Ordering information

Item No.	Variant
ALI 50.900	Multi-Coupling add-on for shaft alignment with sensALIGN 7 (ROTAGLIGN touch, OPTALIGN touch)
ALI 40.900	Multi-Coupling add-on for shaft alignment with sensALIGN 7 (ROTAGLIGN Ultra iS)

The scope of delivery results from the following overview:

Scope of delivery

Item No.	CONTENT		Add-on	
	Description	Details	ALI 50.900	ALI 40.900
ALI 4.900I	sensALIGN 7 sensor	p. 17	✓	✓
ALI 4.910	sensALIGN 7 laser	p. 18	✓	✓
ALI 4.960	sensALIGN 7 rechargeable battery	---	✓	✓
ALI 4.651	sensALIGN 7 charger for rechargeable batteries, international	p. 11	✓	✓
ALI 4.922-2	sensALIGN 7 cable (ROTAGLIGN touch) , 2 m (78 3/4")	---	✓	✗
ALI 4.921-2	sensALIGN 7 cable, 2 m (78 3/4")	---	✗	✓
ALI 3.589	Tape measure, mm/inch	---	✓	✗
ALI 2.911	Cleaning cloth	---	✓	✗
ALI 2.113 SET	Compact chain-type bracket, set		✗	✓

CONTENT			Add-on	
Item No.	Description	Details	ALI 50.900	ALI 40.900
ALI 2.118	Compact chain-type bracket		✓, 2x	✗
ALI 2.170	115 mm (4 1/2") support post, white		✓, 4x	✗
ALI 2.171	150 mm (5 15/16") support post, black		✓, 4x	✗
ALI 2.173	250 mm (9 7/8") support post, green		✓, 4x	✗
ALI 2.174	300 mm (11 13/16") support post, yellow		✓, 4x	✗
0 0557 0391	Support post clip	---	✓, 8x	✗
ALI 2.114	300 mm tension chain		✓, 2x	✗
ALI 4.905	sensALIGN 7 vibration measuring probe		✓	✓
ALI 4.741-L	ROTALIGN Ultra Shaft Lite registration certificate	---	✗	✓
ALI 4.741	ROTALIGN Ultra Shaft Advanced registration certificate	---	✗	✓
ALI 4.740	ROTALIGN Ultra Shaft Expert registration certificate	---	✗	✓
ALI 9.500	sensALIGN 7 sensor inspection certificate	---	✓	✓
ALI 9.501	sensALIGN 7 laser inspection certificate	---	✓	✓
0 0739 1055	Hexagon wrench, DIN 911, size 2.5	---	✓	✓
ALI 4.820	Case for ROTALIGN Ultra iS Shaft Alignment	---	✗	✓
ALI 4.817	Case for Multi-Coupling add-on	---	✓	✗
DOC 40.100	Pocket guide, ROTALIGN Ultra Ultra iS Shaft	---	✗	✓
DOC 50.101	Pocket guide, ROTALIGN touch	---	✓	✗
DOC 51.101	Pocket guide, OPTALIGN touch	---	✓	✗
DOC 50.601	Safety and general information, touch device	---	✓	✗
ALI 17.451	USB pen drive with ARC 4.0 software and device documentation	---	✓	✓

In addition, optional accessories are available:

Optional accessories

Item No.	Description - optional accessories
Brackets	
ALI 2.109 SET	Extra thin bracket set
ALI 2.112 SET-S	Compact magnetic bracket, 2 pcs,, packaged
ALI 2.220 SET	Universal magnetic sliding bracket, set
ALI 2.230-1	Magnetic Sliding Bracket for Flanges
ALI 2.450	Cardan shaft chain-type bracket with rotating arm, set
ALI 2.460	Chain-type bracket for large diameter, set
ALI 2.761 SETIS	Universal magnetic bracket for flanges and bores, set
Miscellaneous	
ALI 4.921-5	sensALIGN 7 cable, 5 meters
ALI 4.410	Dust protection cap for ROTALIGN Ultra sensor socket
ALI 4.605	ROALIGN Ultra battery housing
ALI 2.116	Tension chain, 1500 mm
ALI 2.191	Anti torsion bridge for 2 support posts

Note: For more information about brackets refer to the corresponding accessory catalog.

sensALIGN 7



Features

- Real-time measuring quality with IntelliSWEEP™
- 7-axis measuring system with HD PSD, XXL detector
- Integrated vibration measurement
- Considered vibration influenced from the surroundings
- Integrated precision inclinometers with MEMS
- Laser-sensor communication via laser beam
- Wireless communication via Bluetooth
- Rechargeable Li-polymer battery of the latest generation

TECHNICAL DATA

Parameter	sensALIGN 7 sensor
Measurement range	Unlimited, dynamically extendible (US. Patent 6,040,903)
Measurement resolution	1 µm
CPU	ARM Cortex™ M3 2 GB Flash Memory
LED indicators	4 LEDs for laser adjustment 1 LED for Bluetooth® communication 1 LED for battery status
Power supply	Operating time: 12 hours continuous use Battery: Lithium Polymer rechargeable battery 3.7 V / 1.6 Ah 6 Wh
External interface	Integrated Bluetooth® Class 1 wireless communication, RS232, RS485, IData
Vibration measurement	mm/s, RMS, 10Hz to 1kHz, 0 mm/s – 5000/f • mm/s² (f in Hertz [1/s])
Inclinometer	Resolution: 0.1° Error: ± 0,25 % full scale
Environmental protection	IP 65 (dustproof and water jets resistant) Shockproof Relative humidity: 10% to 90%
Ambient light protection	Yes
Temperature range	Operation: -10 °C to 50 °C (14 °F to 122 °F) Charging: 0 °C to 40 °C (32 °F to 104 °F) Storage: -20 °C to 60 °C (-4 °F to 140 °F)
Dimensions	Approx. 103 x 84 x 60 mm (4 1/16" x 3 5/16" x 2 3/8")
Weight	Approx. 310 g (10.9 oz)

Parameter	sensALIGN 7 laser
Type	Semiconductor laser
Beam power	< 1 mW
Beam divergence	0.3 mrad
Inclinometer	Resolution: 0.1° Error: ± 0.25 % full scale
LED indicators	1 LED for laser transmission 1 LED for battery status
Power supply	Lithium Polymer rechargeable battery 3.7 V / 1.6 Ah 6 Wh AC adapter/charger: 5 V / 3 A Operating time: 70 hours continuous use
Environmental protection	IP 65 (dustproof and water jets resistant) Shockproof Relative humidity: 10% to 90%
Temperature range	Operation: -10 °C to 50 °C (14 °F to 122 °F) Charging: 0 °C to 40 °C (32 °F to 104 °F) Storage: -20 °C to 60 °C (-4 °F to 140 °F)
Dimensions	Approx. 103 x 84 x 60 mm (4 1/16" x 3 5/16" x 2 3/8")
Weight	Approx. 330 g [11.6 oz]

ARC 4.0 - ALIGNMENT RELIABILITY CENTER 4.0

ALIGNMENT RELIABILITY CENTER 4.0 (ARC 4.0) is a newly developed software platform for PRÜFTECHNIK alignment systems.



Features

- Manage plants with an asset orientated machinery management
- Real-time communication via cloud to touch device
- Monitor the history and trend of the alignment status of assets
- Analyze measurement data in detail and report
- Consideration of bearing types and suggestion of adequate measurement modes
- Library with customizable templates for assets, couplings, industrial couplings tolerances, measurement modes and reports
- Coupling type optimized tolerances

Order information

Item No.	Name
ALI 17.000-4	ARC 4.0, OPTALIGN smart device activation
ALI 17.000-7	ARC 4.0, ROTALIGN Ultra device activation
ALI 17.000-21	ARC 4.0, SHAFTALIGN device activation
ALI 17.000-50	ARC 4.0, touch device activation

Note: The scope of supply includes a USB pendrive with the software, a license document and the operating instructions in PDF format.

Productive Maintenance Technology



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